

SECURITY INFORMATION

20 February 1952

MEMORANDUM FOR FILE

SUBJECT: [] Type 106 Radio Direction Finder

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DOC	13	REV DATE	24 APR 1950	BY	018373
ORIG COMP	33	OPI	56	TYPE	02
ORIG CLASS	C	PAGES	2	REV CLASS	C
JUST	22	NEXT REV	2010	AUTH:	HR 754

1. According to an Engineering Division request that this DF equipment be modified for the following requirements -

High frequency coverage - probably to 22 Mc.

A. C. Powered;

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information was obtained from [] (Chief Engineer of [] in a telephone conversation on 19 February 1952, as follows:

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a. Provision can be made to adapt the Type 106 unit for use on frequencies as high as 22 megacycles in bands of a width of approximately 1.5 to 2 octaves per loop antenna using as many loops as required by frequency coverage. It is proposed that the basic 106 be used as an I.F. section and an additional cabinet approximately 8" x 10" x 10" be built to house an R.F. tuning unit with a band switch covering frequency ranges desired which will function as a converter. In this cabinet will be installed an A.C. power supply capable of powering the entire system.

b. The loop (or loops) can be mounted outdoors at a distance of up to 25 feet and direction finding would be accomplished by operation of a goniometer mounted in the R.F. tuning cabinet.

c. The high frequency loops would be of an approximate diameter of one and a half feet each.

d. The present cost of the Type 106 (unmodified) is \$1,280. No estimate can be given on modification costs because of preliminary engineering work which is necessary and this Agency would be expected to withstand their research expense. The unit cost with production runs would be determined at a later date, depending on the number of units required.

e. The first prototype can be provided in approximately 6 months.

2. In view of the above facts, it seems that the finished equipment would become three separate units composed of the Basic 106 section, an R.F. tuning unit and a separate loop for each band of operation with

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many connecting cables, making it cumbersome for installation and considerably expensive for the initial cost.

3. It is felt by of the Policy and Plans Division, as well as the Plant Engineering Branch of the Engineering Division, that these modifications would not answer our needs adequately for a low cost, compact and full coverage Direction Finding unit.

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